

Gordon, the 10th significant tropical cyclone of 1979, developed in late July in the monsoon trough near 20N-135E and eventually made landfall east-northeast of Hong Kong. A stronger sister, Hope (TD 09), followed Gordon several days later on a similar track into Hong Kong. Note that TD 09 (Hope) and TD 10 (Gordon) are alphabetically out of sequence because TD 10 was upgraded to tropical storm stage before TD 09.

Post-analysis revealed that Gordon reached tropical storm intensity at the time of the first warning. CINCPACINST 3140.1N, section 2.5.1., paragraph b states that warnings will be issued when "maximum sustained wind speeds are forecast to increase to 34 or more knots within 48 hours." In this case, there was no lead time between the first warning and tropical storm stage. Figures 3-10-1 and 3-10-2 illustrate why this occurred. TD 10 developed rapidly within the 22-hour time period between these figures. Synoptic data indicated increasing southwest monsoon flow into the area during this period; yet no definitive surface circulation could be located. The most significant finding of the post-analysis was that Gordon could not be traced back 48 hours prior to the first warning from available synoptic and satellite data, and, therefore, falls into the category of a rapid developing system.

Gordon's track took an unexpected jog northwestward while passing south of Taiwan (Fig. 3-10-3). (Typhoon Hope took a similar, but less pronounced, jog.) This northward adjustment is historically evident from tropical cyclones that pass south of Taiwan. The influence of Taiwan's high mountain range is thought to be responsible. As tropical cyclones pass south of Taiwan, they induce lee-side troughing west of the mountains over the Formosa Strait and track northwestward in response.

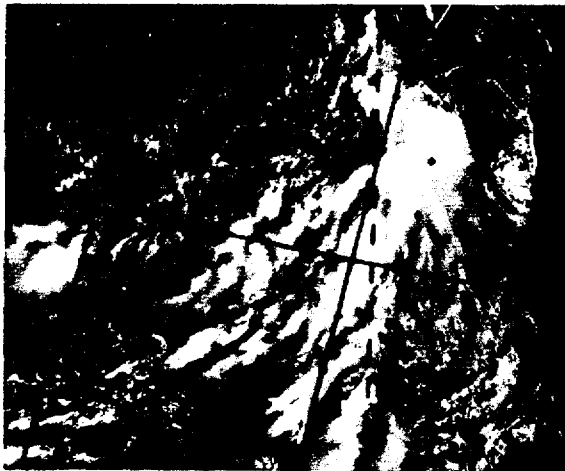


FIGURE 3-10-1. Tropical Storm Gordon in its infancy 4 hours prior to being discussed on the Significant Tropical Weather Advisory (ABEH PGTW), 25 July 1979, 0151Z. (DMSP imagery)

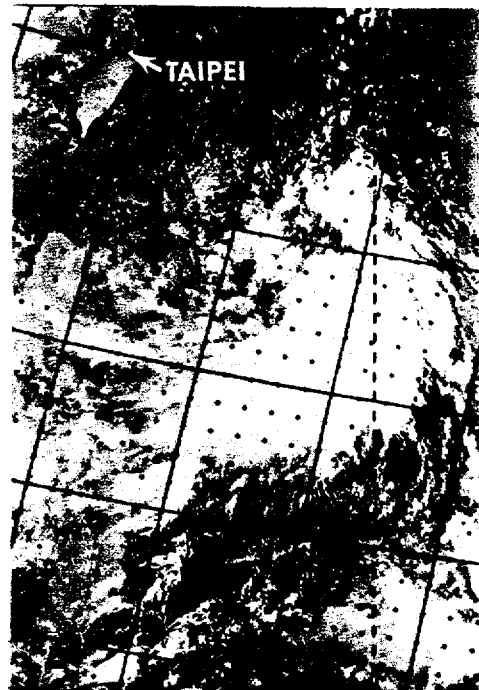


FIGURE 3-10-2. Tropical Storm Gordon 22 hours after Figure 3-10-1 showing increased development, 25 July 1979, 2350Z. A Tropical Cyclone Formation Alert was issued 6 hours prior to this time. (DMSP imagery)



FIGURE 3-10-3. Kaohsiung radar presentation of Gordon at 282103Z after passing south of Taiwan. (Photograph courtesy of the Central Weather Bureau, Taipei, Taiwan.)